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MISCELLANEOUS REPORT NO. 19

COMMODITY DRAIN FROM FORESTS OF THE LAKE STATES

1949

By Arthur G. Horn, Forest Economist

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
Lake States Forest Experiment Station

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Miscellaneous Report No. 19

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INTRODUCTION

An important continuing project of the Lake States Forest Experiment Station is a survey of forest resources. Its purpose is to gather and make available information on the timber supply of the region. One phase of the work is the collection and compilation of timber drain statistics.

Industries and public agencies frequently request data on forest products production and timber drain. To meet these demands effectively the station periodically prepares summaries which give Lake States production and drain data such as that presented here for 1949. Similar reports have been prepared each year since 1946.3/

In using the data given in this report one should keep in mind the standards and definitions used in compiling the information (see definitions). This report differs slightly from those of 1946-1948 in that tops of hardwood saw-timber trees have not been included as drain for lack of sufficient data. Such material will be included in future reports only when adequate data are available to make the necessary calculations.

Basis for Production Statistics

By means of a sample survey the Bureau of Census collected and published regional lumber production statistics for 1949. For lack of statewide figures production ratios of the past several years were applied to obtain a breakdown of the estimated quantity of lumber produced in Minnesota, Wisconsin, and Michigan. These lumber production figures and the 1948-50 average of interstate log shipments were used as a basis for saw log and saw bolt production estimates.

1/ The author gratefully acknowledges the information obtained from many owners and operators of primary wood using establishments in the region who so kindly cooperated and furnished the basic information so necessary for this report.

2/ Maintained the the U. S. Department of Agriculture, Forest Service, in cooperation with the University of Minnesota at University Farm, St. Paul 1, Minnesota.

3/ Miscellaneous Report No. 7 (1946), Miscellaneous Report No. 9, (1947), and Station Paper No. 20 (1948).

For pulpwood, a complete canvass was made of all pulp mills. The volume of logs and bolts received at those mills during the calendar year was used as a basis for production estimates.

Production statistics for commercial and container veneer, chemical wood, excelsior and cooperation were obtained by interpolating between 1948 and 1950 figures.

For such minor items as piling, poles, hewn ties, round and split mine material, etc., production statistics were obtained by using results of a comprehensive survey made in 1947 and comparing with reliable production indexes for 1947-49; i.e. annual underground ore production by states, pole and piling receipts of several large distributors who handle most of the regional output. Because financial limitations precluded making special surveys, estimates for fuel wood, posts, and miscellaneous items were based largely on surveys made during the latter part of World War II. Some adjustments were made on the basis of more recent findings from wholesalers and distributors.

Conversion Factors

The station has collected supplemental information on each product as to (1) percent of wood volume obtained from live, dead, and cull trees, and from byproduct materials, and (2) proportion of volume cut from saw-timber and pole-timber trees. Gross volumes of individual products were determined from information furnished by industry. For example, stock records for posts, poles, and piling showed the number of pieces by length, top, and butt diameters. Such information made possible calculations of gross volume for each product. By incorporating these findings with data collected during a previous field survey (1936-37), a set of conversion and waste factors were prepared which are closely in line with present utilization standards of wood-using industries.

General Limitations of Data

The Forest Survey accuracy goal for timber drain estimates is ±5 percent per billion cubic feet, which would permit a standard error of slightly more than 6 percent on the 1949 estimate for the Lake States. Because of the absence of an accurate survey for fuel wood for that year, the estimates presented here may not be within that limit. We feel, however, that the estimates are the best obtainable at this time and will serve a useful purpose. Figures for most products are within the proposed limits.

Survey Definitions

Commodity Production

The gross volume of a forest product made from any class of material from commercial or noncommercial forest lands. Production has been expressed in the following standard survey units: Board-foot log scale International 1/4-inch rule; cord (4x4x8 foot), rough wood basis; number of pieces; and number of cubic feet (inside bark).

Cutting Drain

The net volume of timber removed from growing stock on commercial forest lands through commodity production and logging waste during the year, expressed in board feet, International 1/4-inch rule and cubic feet (i.b.).

Drain from saw-timber trees.- The net volume (board feet, International 1/4-inch) of the log portion in softwood trees 9 inches and larger and hardwood trees 11 inches and larger, d.b.h., removed during logging operations. The cubic-foot volume shown includes both the saw timber equivalent plus the volume in the tops of softwood trees to a 4-inch minimum.

Drain from pole-timber trees.- The net volume in cubic feet (i.b.) of pole timber removed through cutting during the year. Included in this class are softwood trees from 5.0- to 8.9-inches and hardwood trees from 5.0- to 10.9-inches d.b.h. It includes cubic-foot volume found in the tree stems to a minimum top diameter of 4 inches (i.b.).

CUTTING DRAIN ON PRIMARY GROWING STOCK

1949

Table 1.- Net timber drain resulting from cutting sawlogs and sawbolts in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	39,110	9,250	6,450	1,040	1,760
Minnesota	8,270	1,950	1,360	220	370
Wisconsin	19,090	4,520	3,150	510	860
Michigan	11,750	2,780	1,940	310	530
Red pine	34,760	8,780	5,740	1,480	1,560
Minnesota	15,100	3,810	2,490	640	680
Wisconsin	14,530	3,670	2,400	620	650
Michigan	5,130	1,300	850	220	230
Jack pine	31,170	10,580	5,140	4,040	1,400
Minnesota	22,310	7,570	3,680	2,890	1,000
Wisconsin	3,290	1,120	540	430	150
Michigan	5,570	1,890	920	720	250
Spruce	6,270	1,950	1,030	640	280
Minnesota	2,440	760	400	250	110
Wisconsin	710	220	120	70	30
Michigan	3,120	970	510	320	140
Balsam	3,270	1,030	540	340	150
Minnesota	1,950	610	320	200	90
Wisconsin	490	150	80	50	20
Michigan	830	270	140	90	40
Tamarack	1,840	580	310	190	80
Minnesota	970	300	160	100	40
Wisconsin	710	220	120	70	30
Michigan	160	60	30	20	10
Cedar	5,050	1,580	830	520	230
Minnesota	490	150	80	50	20
Wisconsin	1,240	390	200	130	60
Michigan	3,320	1,040	550	340	150
Hemlock	116,610	25,970	19,240	1,480	5,250
Minnesota	-	-	-	-	-
Wisconsin	37,920	8,450	6,260	480	1,710
Michigan	78,690	17,520	12,980	1,000	3,540
Sfwd. total	238,080	59,720	39,280	9,730	10,710
Minnesota	51,530	15,150	8,490	4,350	2,310
Wisconsin	77,980	18,740	12,870	2,360	3,510
Michigan	108,570	25,830	17,920	3,020	4,890
Maple	151,370	30,760	23,470	7,290	-
Minnesota	1,570	340	260	80	-
Wisconsin	40,040	8,140	6,210	1,930	-
Michigan	109,660	22,280	17,000	5,280	-
Birch	47,600	9,670	7,380	2,290	-
Minnesota	2,150	430	330	100	-
Wisconsin	11,260	2,290	1,750	540	-
Michigan	34,190	6,950	5,300	1,650	-
Basswood	31,860	6,480	4,940	1,540	-
Minnesota	7,040	1,430	1,090	340	-
Wisconsin	12,820	2,610	1,990	620	-
Michigan	12,000	2,440	1,860	580	-
Elm	44,830	9,110	6,950	2,160	-
Minnesota	8,960	1,820	1,390	430	-
Wisconsin	16,810	3,420	2,610	810	-
Michigan	19,060	3,870	2,950	920	-
Beech	14,500	2,940	2,240	700	-
Minnesota	-	-	-	-	-
Wisconsin	540	110	80	30	-
Michigan	13,960	2,830	2,160	670	-
Oak	73,810	14,990	11,440	3,550	-
Minnesota	8,370	1,700	1,300	400	-
Wisconsin	44,530	9,040	6,900	2,140	-
Michigan	20,910	4,250	3,240	1,010	-
Aspen	53,160	32,180	8,500	23,680	-
Minnesota	19,030	11,520	3,040	8,480	-
Wisconsin	21,510	13,020	3,440	9,580	-
Michigan	12,620	7,640	2,020	5,620	-
Cottonwood	8,530	1,730	1,320	410	-
Minnesota	4,490	920	700	220	-
Wisconsin	2,340	470	360	110	-
Michigan	1,700	340	260	80	-
Miscellaneous	16,260	3,310	2,520	790	-
Minnesota	2,440	500	380	120	-
Wisconsin	6,730	1,360	1,040	320	-
Michigan	7,090	1,450	1,100	350	-
Hdwd. total	441,920	111,170	68,760	42,410	-
Minnesota	54,150	18,660	8,490	10,170	-
Wisconsin	156,580	40,460	24,380	16,080	-
Michigan	231,190	52,050	35,890	16,160	-
All species	680,000	170,890	108,040	52,140	10,710
Minnesota	105,680	33,810	16,980	14,520	2,310
Wisconsin	234,560	59,200	37,250	18,440	3,510
Michigan	339,760	77,880	53,810	19,180	4,890

Table 2.- Net timber drain resulting from cutting veneer logs and bolts in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	370	75	65	-	10
Minnesota	20	5	5	-	-
Wisconsin	280	60	50	-	10
Michigan	70	10	10	-	-
Red pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hemlock	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Sfwd. total	370	75	65	-	10
Minnesota	20	5	5	-	-
Wisconsin	280	60	50	-	10
Michigan	70	10	10	-	-
Maple	39,400	6,220	6,110	110	-
Minnesota	720	110	110	-	-
Wisconsin	9,340	1,540	1,450	90	-
Michigan	29,340	4,570	4,550	20	-
Birch	22,100	3,435	3,420	15	-
Minnesota	210	30	30	-	-
Wisconsin	4,650	730	720	10	-
Michigan	17,240	2,675	2,670	5	-
Basswood	12,460	2,145	1,930	215	-
Minnesota	3,430	540	530	10	-
Wisconsin	5,140	1,000	800	200	-
Michigan	3,890	605	600	5	-
Elm	15,670	2,490	2,420	70	-
Minnesota	1,700	260	260	-	-
Wisconsin	7,580	1,220	1,170	50	-
Michigan	6,390	1,010	990	20	-
Beech	8,840	1,370	1,370	-	-
Minnesota	-	-	-	-	-
Wisconsin	130	20	20	-	-
Michigan	8,710	1,350	1,350	-	-
Oak	4,550	700	700	-	-
Minnesota	370	60	60	-	-
Wisconsin	3,190	490	490	-	-
Michigan	990	150	150	-	-
Aspen	930	725	145	580	-
Minnesota	240	70	40	30	-
Wisconsin	660	650	100	550	-
Michigan	30	5	5	-	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	3,190	540	500	40	-
Minnesota	420	70	70	-	-
Wisconsin	990	160	150	10	-
Michigan	1,780	310	280	30	-
Hdwd. total	107,140	17,625	16,595	1,030	-
Minnesota	7,090	1,140	1,100	40	-
Wisconsin	31,680	5,810	4,900	910	-
Michigan	68,370	10,675	10,595	80	-
All species	107,510	17,700	16,660	1,030	10
Minnesota	7,110	1,145	1,105	40	-
Wisconsin	31,960	5,870	4,950	910	10
Michigan	68,440	10,685	10,605	80	-

Table 3.- Net timber drain resulting from pulpwood cuttings in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	10,400	21,760	1,670	19,680	410
Minnesota	6,160	12,990	990	11,760	240
Wisconsin	2,700	5,740	430	5,200	110
Michigan	1,540	3,030	250	2,720	60
Spruce	12,330	25,520	1,990	23,040	490
Minnesota	7,320	15,150	1,180	13,680	290
Wisconsin	1,160	2,640	190	2,400	50
Michigan	3,850	7,730	620	6,960	150
Balsam	12,320	25,420	1,980	22,960	480
Minnesota	4,620	9,320	740	8,400	180
Wisconsin	3,080	6,220	500	5,600	120
Michigan	4,620	9,880	740	8,960	180
Tamarack	160	310	20	290	-
Minnesota	120	230	10	220	-
Wisconsin	40	80	10	70	-
Michigan	-	-	-	-	-
Cedar	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hemlock	33,500	8,390	5,400	1,680	1,310
Minnesota	-	-	-	-	-
Wisconsin	14,630	3,650	2,360	720	570
Michigan	18,870	4,740	3,040	960	740
Sfwd. total	68,710	81,400	11,060	67,650	2,690
Minnesota	18,220	37,690	2,920	34,060	710
Wisconsin	21,610	18,330	3,490	13,990	850
Michigan	28,880	25,380	4,650	19,600	1,130
Maple	90	90	20	70	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	90	90	20	70	-
Birch	770	1,340	150	1,190	-
Minnesota	-	-	-	-	-
Wisconsin	310	920	60	860	-
Michigan	460	420	90	330	-
Basswood	310	250	60	190	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	310	250	60	190	-
Elm	730	670	140	530	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	730	670	140	530	-
Beech	90	90	20	70	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	90	90	20	70	-
Oak	1,100	1,010	210	800	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	1,100	1,010	210	800	-
Aspen	17,410	39,940	2,790	37,150	-
Minnesota	4,620	10,940	740	10,200	-
Wisconsin	6,750	15,190	1,080	14,110	-
Michigan	6,040	13,810	970	12,840	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	20,500	43,390	3,390	40,000	-
Minnesota	4,620	10,940	740	10,200	-
Wisconsin	7,060	16,110	1,140	14,970	-
Michigan	8,820	16,340	1,510	14,830	-
All species	89,210	124,790	14,450	107,650	2,690
Minnesota	22,840	48,630	3,660	44,260	710
Wisconsin	28,670	34,440	4,630	28,960	850
Michigan	37,700	41,720	6,160	34,430	1,130

Table 4.- Net timber drain resulting from fuelwood cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	1,140	1,850	830	940	80
Minnesota	130	230	110	110	10
Wisconsin	670	1,050	450	550	50
Michigan	340	570	270	280	20
Red pine	210	330	150	180	-
Minnesota	70	110	50	60	-
Wisconsin	70	110	50	60	-
Michigan	70	110	50	60	-
Jack pine	1,040	1,700	770	860	70
Minnesota	470	800	380	390	30
Wisconsin	540	840	360	440	40
Michigan	30	60	30	30	-
Spruce	300	510	240	260	10
Minnesota	200	340	160	170	10
Wisconsin	30	60	30	30	-
Michigan	70	110	50	60	-
Balsam	330	580	280	280	20
Minnesota	270	460	220	220	20
Wisconsin	30	60	30	30	-
Michigan	30	60	30	30	-
Tamarack	1,950	3,240	1,510	1,600	130
Minnesota	1,480	2,500	1,190	1,210	100
Wisconsin	400	630	270	330	30
Michigan	70	110	50	60	-
Cedar	410	640	280	340	20
Minnesota	70	110	50	60	-
Wisconsin	270	420	180	220	20
Michigan	70	110	50	60	-
Hemlock	2,020	3,230	1,440	1,650	140
Minnesota	-	-	-	-	-
Wisconsin	1,350	2,090	900	1,100	90
Michigan	670	1,140	540	550	50
Sfwd. total	7,400	12,080	5,500	6,110	470
Minnesota	2,690	4,550	2,160	2,220	170
Wisconsin	3,360	5,260	2,270	2,760	230
Michigan	1,350	2,270	1,070	1,130	70
Maple	18,270	17,140	8,840	8,300	-
Minnesota	630	600	310	290	-
Wisconsin	6,930	6,320	3,170	3,150	-
Michigan	10,710	10,220	5,360	4,860	-

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
Birch	10,380	9,740	5,020	4,720	-
Minnesota	2,830	2,710	1,420	1,290	-
Wisconsin	4,090	3,730	1,870	1,860	-
Michigan	3,460	3,300	1,730	1,570	-
Basswood	5,040	4,680	2,400	2,280	-
Minnesota	2,520	2,400	1,260	1,140	-
Wisconsin	1,260	1,140	570	570	-
Michigan	1,260	1,140	570	570	-
Elm	13,860	13,080	6,790	6,290	-
Minnesota	4,410	4,200	2,200	2,000	-
Wisconsin	3,150	2,870	1,440	1,430	-
Michigan	6,300	6,010	3,150	2,860	-
Beech	1,420	1,340	700	640	-
Minnesota	-	-	-	-	-
Wisconsin	160	140	70	70	-
Michigan	1,260	1,200	630	570	-
Oak	37,480	34,970	17,950	17,020	-
Minnesota	7,560	7,210	3,780	3,430	-
Wisconsin	18,580	16,940	8,500	8,440	-
Michigan	11,340	10,820	5,670	5,150	-
Aspen	27,090	25,510	13,220	12,290	-
Minnesota	11,970	11,420	5,990	5,430	-
Wisconsin	7,560	6,880	3,450	3,430	-
Michigan	7,560	7,210	3,780	3,430	-
Ash	2,510	2,360	1,210	1,150	-
Minnesota	630	600	310	290	-
Wisconsin	940	860	430	430	-
Michigan	940	900	470	430	-
Miscellaneous	6,770	6,400	3,330	3,070	-
Minnesota	4,090	3,910	2,050	1,860	-
Wisconsin	1,420	1,290	650	640	-
Michigan	1,260	1,200	630	570	-
Hdwd. total	122,820	115,220	59,460	55,760	-
Minnesota	34,640	33,050	17,320	15,730	-
Wisconsin	44,090	40,170	20,150	20,020	-
Michigan	44,090	42,000	21,990	20,010	-
All species	130,220	127,300	64,960	61,870	470
Minnesota	37,330	37,600	19,480	17,950	170
Wisconsin	47,450	45,430	22,420	22,780	230
Michigan	45,440	44,270	23,060	21,140	70

Table 5.- Net timber drain resulting from cutting piling in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	250	45	35	-	10
Minnesota	170	25	20	-	5
Wisconsin	80	20	15	-	5
Michigan	-	-	-	-	-
Jack pine	140	25	20	-	5
Minnesota	140	25	20	-	5
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hemlock	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Sfwd. total	390	70	55	-	15
Minnesota	310	50	40	-	10
Wisconsin	80	20	15	-	5
Michigan	-	-	-	-	-
Maple	60	10	10	-	-
Minnesota	-	-	-	-	-
Wisconsin	60	10	10	-	-
Michigan	-	-	-	-	-

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
Birch	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Basswood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Elm	500	75	75	-	-
Minnesota	-	-	-	-	-
Wisconsin	500	75	75	-	-
Michigan	-	-	-	-	-
Beech	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Oak	140	20	20	-	-
Minnesota	-	-	-	-	-
Wisconsin	140	20	20	-	-
Michigan	-	-	-	-	-
Aspen	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Ash	10	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	10	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	710	105	105	-	-
Minnesota	-	-	-	-	-
Wisconsin	710	105	105	-	-
Michigan	-	-	-	-	-
All species	1,100	175	160	-	15
Minnesota	310	50	40	-	10
Wisconsin	790	125	120	-	5
Michigan	-	-	-	-	-

Table 6.- Net timber drain resulting from chemical wood cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hemlock	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Sfwd. total	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Maple	5,540	1,540	1,290	250	-
Minnesota	-	-	-	-	-
Wisconsin	140	40	30	10	-
Michigan	5,400	1,500	1,260	240	-
Birch	2,970	820	690	130	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	2,970	820	690	130	-
Basswood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Elm	140	40	30	10	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	140	40	30	10	-
Beech	950	260	220	40	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	950	260	220	40	-
Oak	140	40	30	10	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	140	40	30	10	-
Aspen	410	110	90	20	-
Minnesota	-	-	-	-	-
Wisconsin	410	110	90	20	-
Michigan	-	-	-	-	-
Ash	140	40	30	10	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	140	40	30	10	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	10,290	2,850	2,380	470	-
Minnesota	-	-	-	-	-
Wisconsin	550	150	120	30	-
Michigan	9,740	2,700	2,260	440	-
All species	10,290	2,850	2,380	470	-
Minnesota	-	-	-	-	-
Wisconsin	550	150	120	30	-
Michigan	9,740	2,700	2,260	440	-

Table 7.- Net timber drain resulting from cutting excelsior bolts in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hemlock	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Sfwd. total	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Maple	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Birch	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Basswood	30	250	10	240	-
Minnesota	-	-	-	-	-
Wisconsin	20	170	10	160	-
Michigan	10	80	-	80	-
Elm	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Beech	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Oak	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Aspen	770	5,890	150	5,740	-
Minnesota	-	-	-	-	-
Wisconsin	370	2,820	70	2,750	-
Michigan	400	3,070	80	2,990	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	800	6,140	160	5,980	-
Minnesota	-	-	-	-	-
Wisconsin	390	2,990	80	2,910	-
Michigan	410	3,150	80	3,070	-
All species	800	6,140	160	5,980	-
Minnesota	-	-	-	-	-
Wisconsin	390	2,990	80	2,910	-
Michigan	410	3,150	80	3,070	-

Table 8.- Net timber drain resulting from fence post cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	270	250	60	170	20
Minnesota	180	160	40	110	10
Wisconsin	90	90	20	60	10
Michigan	-	-	-	-	-
Jack pine	680	610	140	420	50
Minnesota	450	400	90	280	30
Wisconsin	140	120	30	80	10
Michigan	90	90	20	60	10
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	90	90	20	60	10
Minnesota	90	90	20	60	10
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	640	570	130	390	50
Minnesota	270	240	50	170	20
Wisconsin	230	210	50	140	20
Michigan	140	120	30	80	10
Cedar	4,660	4,280	980	2,980	320
Minnesota	630	560	130	390	40
Wisconsin	1,080	950	220	660	70
Michigan	3,150	2,770	630	1,930	210
Hemlock	140	130	30	90	10
Minnesota	-	-	-	-	-
Wisconsin	90	90	20	60	10
Michigan	50	40	10	30	-
Sfwd. total	6,680	5,930	1,360	4,110	460
Minnesota	1,620	1,450	330	1,010	110
Wisconsin	1,630	1,460	340	1,000	120
Michigan	3,430	3,020	690	2,100	230
Maple	270	240	60	180	-
Minnesota	90	80	20	60	-
Wisconsin	90	80	20	60	-
Michigan	90	80	20	60	-
Birch	230	200	50	150	-
Minnesota	50	40	10	30	-
Wisconsin	90	80	20	60	-
Michigan	90	80	20	60	-
Basswood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Elm	410	340	90	250	-
Minnesota	50	40	10	30	-
Wisconsin	180	150	40	110	-
Michigan	180	150	40	110	-
Beech	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Oak	11,520	9,370	2,300	7,070	-
Minnesota	2,160	1,760	430	1,330	-
Wisconsin	6,390	5,200	1,280	3,920	-
Michigan	2,970	2,410	590	1,820	-
Aspen	1,080	880	210	670	-
Minnesota	450	370	90	280	-
Wisconsin	360	290	70	220	-
Michigan	270	220	50	170	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	540	450	110	340	-
Minnesota	90	80	20	60	-
Wisconsin	270	220	50	170	-
Michigan	180	150	40	110	-
Hdwd. total	14,050	11,480	2,820	8,660	-
Minnesota	2,890	2,370	580	1,790	-
Wisconsin	7,380	6,020	1,480	4,540	-
Michigan	3,780	3,090	760	2,330	-
All species	20,730	17,410	4,180	12,770	460
Minnesota	4,510	3,820	910	2,800	110
Wisconsin	9,010	7,480	1,820	5,540	120
Michigan	7,210	6,110	1,450	4,430	230

Table 9.- Net timber drain resulting from cutting utility poles in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	140	50	30	15	5
Minnesota	140	50	30	15	5
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	460	165	90	60	15
Minnesota	410	145	80	50	15
Wisconsin	50	20	10	10	-
Michigan	-	-	-	-	-
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	3,240	1,185	670	390	125
Minnesota	1,920	695	390	230	75
Wisconsin	220	90	50	30	10
Michigan	1,100	400	230	130	40
Hemlock	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Sfwd. total	3,840	1,400	790	465	145
Minnesota	2,470	890	500	295	95
Wisconsin	270	110	60	40	10
Michigan	1,100	400	230	130	40
Maple	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Birch	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Basswood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Elm	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Beech	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Oak	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Aspen	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
All species	3,840	1,400	790	465	145
Minnesota	2,470	890	500	295	95
Wisconsin	270	110	60	40	10
Michigan	1,100	400	230	130	40

Table 10.- Net timber drain resulting from hewn tie cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	5	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	5	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	5	-	-	-	-
Minnesota	5	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	45	20	10	10	-
Minnesota	5	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	40	20	10	10	-
Hemlock	10	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	10	-	-	-	-
Sfwd. total	65	20	10	10	-
Minnesota	10	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	55	20	10	10	-
Maple	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
Birch	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Basswood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Elm	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Beech	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Oak	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Aspen	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
All species	65	20	10	10	-
Minnesota	10	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	55	20	10	10	-

Table 11.- Net timber drain resulting from mine timber cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	70	10	10	-	-
Minnesota	50	10	10	-	-
Wisconsin	-	-	-	-	-
Michigan	20	-	-	-	-
Red pine	200	60	30	20	10
Minnesota	200	60	30	20	10
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	2,780	820	440	300	80
Minnesota	2,780	820	440	300	80
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	20	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	20	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	5,220	1,560	840	560	160
Minnesota	2,550	760	410	270	80
Wisconsin	360	110	60	40	10
Michigan	2,310	690	370	250	70
Cedar	4,500	1,340	740	470	130
Minnesota	780	230	130	80	20
Wisconsin	230	70	40	20	10
Michigan	3,490	1,040	570	370	100
Hemlock	860	240	130	90	20
Minnesota	-	-	-	-	-
Wisconsin	30	-	-	-	-
Michigan	830	240	130	90	20
Sfwd. total	13,650	4,030	2,190	1,440	400
Minnesota	6,360	1,880	1,020	670	190
Wisconsin	620	180	100	60	20
Michigan	6,670	1,970	1,070	710	190
Maple	5,620	1,350	940	410	-
Minnesota	90	30	20	10	-
Wisconsin	290	70	50	20	-
Michigan	5,240	1,250	870	380	-

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
Birch	1,750	410	290	120	-
Minnesota	20	-	-	-	-
Wisconsin	180	40	30	10	-
Michigan	1,550	370	260	110	-
Basswood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Elm	460	110	80	30	-
Minnesota	140	30	20	10	-
Wisconsin	50	10	10	-	-
Michigan	270	70	50	20	-
Beech	340	80	60	20	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	340	80	60	20	-
Oak	70	10	10	-	-
Minnesota	-	-	-	-	-
Wisconsin	20	-	-	-	-
Michigan	50	10	10	-	-
Aspen	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Ash	230	60	40	20	-
Minnesota	230	60	40	20	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	8,470	2,020	1,420	600	-
Minnesota	480	120	80	40	-
Wisconsin	540	120	90	30	-
Michigan	7,450	1,780	1,250	530	-
All species	22,120	6,050	3,610	2,040	400
Minnesota	6,840	2,000	1,100	710	190
Wisconsin	1,160	300	190	90	20
Michigan	14,120	3,750	2,320	1,240	190

Table 12.- Net timber drain resulting from cooperage log cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Red pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Jack pine	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Spruce	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Balsam	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Tamarack	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cedar	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hemlock	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Sfwd. total	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Maple	180	30	30	-	-
Minnesota	180	30	30	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Birch	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Basswood	220	40	40	-	-
Minnesota	100	20	20	-	-
Wisconsin	120	20	20	-	-
Michigan	-	-	-	-	-
Elm	590	90	90	-	-
Minnesota	590	90	90	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Beech	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Oak	1,510	240	240	-	-
Minnesota	480	80	80	-	-
Wisconsin	1,030	160	160	-	-
Michigan	-	-	-	-	-
Aspen	60	10	10	-	-
Minnesota	60	10	10	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Cottonwood	320	50	50	-	-
Minnesota	320	50	50	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	30	-	-	-	-
Minnesota	30	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Hdwd. total	2,910	460	460	-	-
Minnesota	1,760	280	280	-	-
Wisconsin	1,150	180	180	-	-
Michigan	-	-	-	-	-
All species	2,910	460	460	-	-
Minnesota	1,760	280	280	-	-
Wisconsin	1,150	180	180	-	-
Michigan	-	-	-	-	-

Table 13.- Net timber drain resulting from cutting miscellaneous rough forest products, Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	540	210	90	90	30
Minnesota	180	70	30	30	10
Wisconsin	180	70	30	30	10
Michigan	180	70	30	30	10
Red pine	240	80	40	40	-
Minnesota	110	40	20	20	-
Wisconsin	60	20	10	10	-
Michigan	70	20	10	10	-
Jack pine	590	200	100	80	20
Minnesota	250	90	40	40	10
Wisconsin	120	30	20	10	-
Michigan	220	80	40	30	10
Spruce	180	50	30	20	-
Minnesota	70	20	10	10	-
Wisconsin	40	10	10	-	-
Michigan	70	20	10	10	-
Balsam	390	130	60	60	10
Minnesota	140	40	20	20	-
Wisconsin	70	20	10	10	-
Michigan	180	70	30	30	10
Tamarack	180	50	30	20	-
Minnesota	70	20	10	10	-
Wisconsin	40	10	10	-	-
Michigan	70	20	10	10	-
Cedar	1,920	660	320	270	70
Minnesota	250	90	40	40	10
Wisconsin	480	160	80	60	20
Michigan	1,190	410	200	170	40
Hemlock	140	40	20	20	-
Minnesota	-	-	-	-	-
Wisconsin	70	20	10	10	-
Michigan	70	20	10	10	-
Sfwd. total	4,180	1,420	690	600	130
Minnesota	1,070	370	170	170	30
Wisconsin	1,060	340	180	130	30
Michigan	2,050	710	340	300	70
Maple	2,560	660	430	230	-
Minnesota	-	-	-	-	-
Wisconsin	310	80	50	30	-
Michigan	2,250	580	380	200	-
Birch	770	210	140	70	-
Minnesota	630	170	110	60	-
Wisconsin	90	30	20	10	-
Michigan	50	10	10	-	-
Basswood	630	170	120	50	-
Minnesota	270	70	50	20	-
Wisconsin	270	70	50	20	-
Michigan	90	30	20	10	-
Elm	270	70	50	20	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	270	70	50	20	-
Beech	2,250	580	380	200	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	2,250	580	380	200	-
Oak	370	90	70	20	-
Minnesota	50	10	10	-	-
Wisconsin	50	10	10	-	-
Michigan	270	70	50	20	-
Aspen	5,210	1,340	870	470	-
Minnesota	3,240	830	540	290	-
Wisconsin	1,350	350	230	120	-
Michigan	620	160	100	60	-
Cottonwood	-	-	-	-	-
Minnesota	-	-	-	-	-
Wisconsin	-	-	-	-	-
Michigan	-	-	-	-	-
Miscellaneous	320	90	60	30	-
Minnesota	-	-	-	-	-
Wisconsin	90	30	20	10	-
Michigan	230	60	40	20	-
Hdwd. total	12,380	3,210	2,120	1,090	-
Minnesota	4,190	1,080	710	370	-
Wisconsin	2,160	570	380	190	-
Michigan	6,030	1,560	1,030	530	-
All species	16,560	4,630	2,810	1,690	130
Minnesota	5,260	1,450	880	540	30
Wisconsin	3,220	910	560	320	30
Michigan	8,080	2,270	1,370	830	70

Table 14.- Total net timber drain resulting from cutting in the Lake States - 1949

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
White pine	41,230	11,395	7,445	2,070	1,880
Minnesota	8,650	2,265	1,515	360	390
Wisconsin	20,220	5,700	3,680	1,090	930
Michigan	12,360	3,430	2,250	620	560
Red pine	36,070	9,595	6,085	1,905	1,605
Minnesota	15,970	4,255	2,680	865	710
Wisconsin	14,830	3,910	2,495	750	665
Michigan	5,270	1,430	910	290	230
Jack pine	47,260	35,860	8,370	25,440	2,050
Minnesota	32,970	22,840	5,720	15,710	1,410
Wisconsin	6,840	7,870	1,390	6,170	310
Michigan	7,450	5,150	1,260	3,560	330
Spruce	19,105	28,030	3,290	23,960	780
Minnesota	10,030	15,270	1,750	14,110	410
Wisconsin	1,940	2,930	350	2,500	80
Michigan	7,135	8,830	1,190	7,350	290
Balsam	16,400	27,250	2,880	23,700	670
Minnesota	7,070	10,520	1,320	8,900	300
Wisconsin	3,670	6,450	620	5,690	140
Michigan	5,660	10,280	940	9,110	230
Tamarack	9,995	6,310	2,840	3,050	420
Minnesota	5,465	4,050	1,830	1,980	240
Wisconsin	1,780	1,260	520	650	90
Michigan	2,750	1,000	490	420	90
Cedar	20,025	9,705	3,830	4,980	895
Minnesota	4,145	1,835	820	850	165
Wisconsin	3,520	2,080	770	1,120	190
Michigan	12,360	5,790	2,240	3,010	540
Hemlock	153,280	38,000	26,260	5,010	6,730
Minnesota	-	-	-	-	-
Wisconsin	54,090	14,300	9,550	2,370	2,380
Michigan	99,190	23,700	16,710	2,640	4,350
Sfwd. total	343,365	166,145	61,000	90,115	15,030
Minnesota	84,300	62,035	15,635	42,775	3,625
Wisconsin	106,890	44,500	19,375	20,340	4,785
Michigan	152,175	59,610	25,990	27,000	6,620
Maple	223,360	58,040	41,200	16,840	-
Minnesota	3,380	1,190	750	440	-
Wisconsin	57,200	16,280	10,990	5,290	-
Michigan	162,780	40,570	29,460	11,110	-

Species and state	Total		Saw tbr.	Pole tbr.	Tops
	M bd.ft.	M cu.ft.	M cu.ft.	M cu.ft.	M cu.ft.
Birch	86,570	25,825	17,140	8,685	-
Minnesota	5,890	3,380	1,900	1,480	-
Wisconsin	20,670	7,820	4,470	3,350	-
Michigan	60,010	14,625	10,770	3,855	-
Basswood	50,550	14,015	9,500	4,515	-
Minnesota	13,360	4,460	2,950	1,510	-
Wisconsin	19,630	5,010	3,440	1,570	-
Michigan	17,560	4,545	3,110	1,435	-
Elm	77,460	26,075	16,715	9,360	-
Minnesota	15,850	6,440	3,970	2,470	-
Wisconsin	28,270	7,745	5,345	2,400	-
Michigan	33,340	11,890	7,400	4,490	-
Beech	28,390	6,660	4,990	1,670	-
Minnesota	-	-	-	-	-
Wisconsin	830	270	170	100	-
Michigan	27,560	6,390	4,820	1,570	-
Oak	130,690	61,440	32,970	28,470	-
Minnesota	18,990	10,820	5,660	5,160	-
Wisconsin	73,930	31,860	17,360	14,500	-
Michigan	37,770	18,760	9,950	8,810	-
Aspen	106,120	106,585	25,985	80,600	-
Minnesota	39,610	35,160	10,450	24,710	-
Wisconsin	38,970	39,310	8,530	30,780	-
Michigan	27,540	32,115	7,005	25,110	
Cottonwood	8,850	1,780	1,370	410	-
Minnesota	4,810	970	750	220	-
Wisconsin	2,340	470	360	110	-
Michigan	1,700	340	260	80	-
Miscellaneous	30,000	13,250	7,800	5,450	-
Minnesota	7,930	5,220	2,870	2,350	-
Wisconsin	10,450	3,920	2,340	1,580	-
Michigan	11,620	4,110	2,590	1,520	-
Hdwd. total	741,990	313,670	157,670	156,000	-
Minnesota	109,820	67,640	29,300	38,340	-
Wisconsin	252,290	112,685	53,005	59,680	-
Michigan	379,880	133,345	75,365	57,980	-
All species	1,085,355	479,815	218,670	246,115	15,030
Minnesota	194,120	129,675	44,935	81,115	3,625
Wisconsin	359,180	157,185	72,380	80,020	4,785
Michigan	532,055	192,955	101,355	84,980	6,620

FOREST PRODUCTS HARVESTED

IN THE LAKE STATES

1949

Table 15.- Saw log and saw bolt production in the Lake States - 1949

Species and origin	Volume cut and destination			
	Total	Minn.	Wis.	Mich.
	M bd.ft., Int'l. 1/4-inch			
White pine	42,190	8,923	20,989	12,278
Minn.	8,923	8,923	-	-
Wis.	20,589	-	20,489	100
Mich.	12,678	-	500	12,178
Red pine	39,704	17,252	16,705	5,747
Minn.	17,252	17,252	-	-
Wis.	16,593	-	16,573	20
Mich.	5,859	-	132	5,727
Jack pine	46,556	33,317	5,141	8,098
Minn.	33,317	33,317	-	-
Wis.	4,919	-	4,919	-
Mich.	8,320	-	222	8,098
Spruce	8,689	3,380	993	4,316
Minn.	3,380	3,380	-	-
Wis.	979	-	899	80
Mich.	4,330	-	94	4,236
Balsam	4,541	2,705	700	1,136
Minn.	2,705	2,705	-	-
Wis.	682	-	677	5
Mich.	1,154	-	23	1,131
Tamarack	2,563	1,352	984	227
Minn.	1,352	1,352	-	-
Wis.	984	-	984	-
Mich.	227	-	-	227
Cedar	7,004	676	1,785	4,543
Minn.	676	676	-	-
Wis.	1,725	-	1,720	5
Mich.	4,603	-	65	4,538
Hemlock	119,175	-	41,943	77,232
Minn.	-	-	-	-
Wis.	38,753	-	37,053	1,700
Mich.	80,422	-	4,890	75,532
Sfwd. total	270,422	67,605	89,240	113,577
Minn.	67,605	67,605	-	-
Wis.	85,224	-	83,314	1,910
Mich.	117,593	-	5,926	111,667
Maple	179,676	1,780	57,976	120,120
Minn.	1,980	1,780	200	-
Wis.	47,576	-	46,276	1,300
Mich.	130,320	-	11,500	118,820
Birch	56,560	2,550	18,520	35,490
Minn.	2,550	2,550	-	-
Wis.	13,377	-	11,877	1,500
Mich.	40,633	-	6,643	33,990
Basswood	37,869	8,014	16,205	13,650
Minn.	8,364	8,014	350	-
Wis.	15,240	-	15,140	100
Mich.	14,265	-	715	13,550
Elm	53,275	10,600	20,835	21,840
Minn.	10,650	10,600	50	-
Wis.	19,975	-	19,935	40
Mich.	22,650	-	850	21,800
Beech	17,230	-	850	16,380
Minn.	-	-	-	-
Wis.	640	-	640	-
Mich.	16,590	-	210	16,380
Oak	87,716	9,800	53,346	24,570
Minn.	9,950	9,800	150	-
Wis.	52,914	-	52,904	10
Mich.	24,852	-	292	24,560
Aspen	131,606	48,060	52,808	30,738
Minn.	47,110	47,110	-	-
Wis.	53,248	950	51,748	550
Mich.	31,248	-	1,060	30,188
Cottonwood	10,142	5,340	2,780	2,022
Minn.	5,340	5,340	-	-
Wis.	2,780	-	2,780	-
Mich.	2,022	-	-	2,022
Ash	15,076	2,671	6,945	5,460
Minn.	2,671	2,671	-	-
Wis.	6,760	-	6,670	90
Mich.	5,645	-	275	5,370
Hickory	610	-	100	510
Minn.	-	-	-	-
Wis.	100	-	100	-
Mich.	510	-	-	510
Cherry	735	15	50	670
Minn.	15	15	-	-
Wis.	50	-	50	-
Mich.	670	-	-	670
Walnut	220	20	40	160
Minn.	20	20	-	-
Wis.	40	-	40	-
Mich.	160	-	-	160
Misc.	2,690	190	1,050	1,450
Minn.	190	190	-	-
Wis.	1,050	-	1,050	-
Mich.	1,450	-	-	1,450
Hdwd. total	593,605	89,040	231,505	273,060
Minn.	88,840	88,090	750	-
Wis.	213,750	950	209,210	3,590
Mich.	291,015	-	21,545	269,470
All species	864,027	156,645	320,745	386,637
Minn.	156,445	155,695	750	-
Wis.	298,974	950	292,524	5,500
Mich.	408,608	-	27,471	381,137

Table 16.- Production of logs and bolts for veneer industry in the Lake States 1949

Species and origin	Volume cut and destination					Heading stock	Imports	
	Total	Minn.	Wis.	Mich.	Other U. S.		Other U. S.	Foreign Canada
	M bd.ft., Int'l. 1/4-inch rule					Standard cords	M bd.ft. Int'l 1/4-inch	
White pine	350	20	330	-	-	-	-	15
Minnesota	20	20	-	-	-	-	-	-
Wisconsin	270	-	270	-	-	-	-	5
Michigan	60	-	60	-	-	-	-	10
Maple	37,030	80	18,280	18,590	80	1,900	140	1,120
Minnesota	680	80	600	-	-	-	-	-
Wisconsin	8,650	-	8,640	10	-	1,600	100	500
Michigan	27,700	-	9,040	18,580	80	300	40	620
Birch	20,875	170	13,420	7,285	-	300	-	10,470
Minnesota	195	155	30	10	-	-	-	-
Wisconsin	4,380	15	4,340	25	-	200	-	8,250
Michigan	16,300	-	9,050	7,250	-	100	-	2,220
Basswood	11,360	900	8,930	1,515	15	3,790	480	60
Minnesota	3,220	900	2,300	20	-	250	-	-
Wisconsin	4,470	-	4,450	20	-	3,450	350	40
Michigan	3,670	-	2,180	1,475	15	90	130	20
Elm	14,680	230	9,795	4,620	35	1,240	410	160
Minnesota	1,605	230	1,375	-	-	-	-	-
Wisconsin	7,070	-	7,020	50	-	940	310	40
Michigan	6,005	-	1,400	4,570	35	300	100	120
Beech	8,365	-	855	7,510	-	-	10	-
Minnesota	-	-	-	-	-	-	-	-
Wisconsin	125	-	125	-	-	-	-	-
Michigan	8,240	-	730	7,510	-	-	10	-
Oak	4,300	-	3,600	600	100	20	310	260
Minnesota	350	-	340	10	-	-	-	-
Wisconsin	3,010	-	2,840	170	-	20	150	150
Michigan	940	-	420	420	100	-	160	110
Aspen	605	240	345	20	-	8,150	-	-
Minnesota	210	210	-	-	-	450	-	-
Wisconsin	370	30	340	-	-	7,700	-	-
Michigan	25	-	5	20	-	-	-	-
Ash	1,590	10	1,220	360	-	720	10	-
Minnesota	60	10	50	-	-	-	-	-
Wisconsin	620	-	620	-	-	230	10	-
Michigan	910	-	550	360	-	490	-	-
Walnut	403	-	3	-	400	-	-	-
Minnesota	20	-	-	-	20	-	-	-
Wisconsin	133	-	3	-	130	-	-	-
Michigan	250	-	-	-	250	-	-	-
Other	920	150	285	465	20	70	300	120
Minnesota	310	150	160	-	-	20	-	-
Wisconsin	140	-	125	15	-	30	80	120
Michigan	470	-	-	450	20	20	220	-
All species	100,478	1,800	57,063	40,965	650	16,190	1,660	12,205
Minnesota	6,670	1,755	4,855	40	20	720	-	-
Wisconsin	29,238	45	28,773	290	130	14,170	1,000	9,105
Michigan	64,570	-	23,435	40,635	500	1,300	660	3,100

Table 17.- Pulpwood production and imports in the Lake States - 1949

Species and origin	Volume cut and destination					Imports	
	Total	Minnesota	Wisconsin	Michigan	Other U. S.	Other U. S.	Foreign Canada
	Thousand standard cords, rough wood basis						
Pine	273	81	168	24	-	47	69
Minnesota	163	81	80	2	-	-	29
Wisconsin	72	-	72	-	-	47	12
Michigan	38	-	16	22	-	-	28
Spruce	320	102	194	24	-	9	377
Minnesota	190	102	88	-	-	-	12
Wisconsin	33	-	33	-	-	9	301
Michigan	97	-	73	24	-	-	64
Balsam	319	48	241	30	-	-	18
Minnesota	117	48	69	-	-	-	-
Wisconsin	78	-	78	-	-	-	3
Michigan	124	-	94	30	-	-	15
Tamarack	4	2	2	-	-	-	-
Minnesota	3	2	1	-	-	-	-
Wisconsin	1	-	1	-	-	-	-
Michigan	-	-	-	-	-	-	-
Hemlock	108	-	101	7	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	47	-	47	-	-	-	-
Michigan	61	-	54	7	-	-	-
Sfwd. total	1,024	233	706	85	-	56	464
Minnesota	473	233	238	2	-	-	41
Wisconsin	231	-	231	-	-	56	316
Michigan	320	-	237	83	-	-	107
Birch	15	-	15	-	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	10	-	10	-	-	-	-
Michigan	5	-	5	-	-	-	-
Aspen	486	125	311	21	29	-	60
Minnesota	133	121	12	-	-	-	19
Wisconsin	185	4	181	-	-	-	22
Michigan	168	-	118	21	29	-	19
Misc.hdwds.	25	-	-	25	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	-	-	-	-	-	-	-
Michigan	25	-	-	25	-	-	-
Hdwd. total	526	125	326	46	29	-	60
Minnesota	133	121	12	-	-	-	19
Wisconsin	195	4	191	-	-	-	22
Michigan	198	-	123	46	29	-	19
Slabs, etc.	2	-	2	-	-	-	-
Minnesota	-	-	-	-	-	-	-
Wisconsin	2	-	2	-	-	-	-
Michigan	-	-	-	-	-	-	-
All species	1,552	358	1,034	131	29	56	524
Minnesota	606	354	250	2	-	-	60
Wisconsin	428	4	424	-	-	56	338
Michigan	518	-	360	129	29	-	126

Table 18.- Production fuelwood, chemical wood, and excelsior bolts in the Lake States - 1949

Species and origin	Volume cut 1/		
	Fuel wood	Chemical wood	Excelsior
	M standard cords		
White pine	170	-	-
Minnesota	20	-	-
Wisconsin	100	-	-
Michigan	50	-	-
Red pine	30	-	-
Minnesota	10	-	-
Wisconsin	10	-	-
Michigan	10	-	-
Jack pine	155	-	-
Minnesota	70	-	-
Wisconsin	80	-	-
Michigan	5	-	-
Spruce	45	-	-
Minnesota	30	-	-
Wisconsin	5	-	-
Michigan	10	-	-
Balsam	50	-	-
Minnesota	40	-	-
Wisconsin	5	-	-
Michigan	5	-	-
Tamarack	290	-	-
Minnesota	220	-	-
Wisconsin	60	-	-
Michigan	10	-	-
Cedar	60	-	-
Minnesota	10	-	-
Wisconsin	40	-	-
Michigan	10	-	-
Hemlock	300	-	-
Minnesota	-	-	-
Wisconsin	200	-	-
Michigan	100	-	-
Sfwd. total	1,100	-	-
Minnesota	400	-	-
Wisconsin	500	-	-
Michigan	200	-	-
Maple	580	41	-
Minnesota	20	-	-
Wisconsin	220	1	-
Michigan	340	40	-
Birch	330	22	-
Minnesota	90	-	-
Wisconsin	130	2/	-
Michigan	110	22	-
Basswood	160	-	3
Minnesota	80	-	-
Wisconsin	40	-	2
Michigan	40	-	1
Elm	440	1	-
Minnesota	140	-	-
Wisconsin	100	-	-
Michigan	200	1	-
Beech	45	7	-
Minnesota	-	-	-
Wisconsin	5	-	-
Michigan	40	7	-
Oak	1,190	1	-
Minnesota	240	-	-
Wisconsin	590	-	-
Michigan	360	1	-
Aspen	860	3	71
Minnesota	380	-	2/
Wisconsin	240	3	34
Michigan	240	-	37
Ash	80	1	-
Minnesota	20	-	-
Wisconsin	30	-	-
Michigan	30	1	-
Misc.	215	2/	-
Minnesota	130	-	-
Wisconsin	45	-	-
Michigan	40	2/	-
Hdwd. total	3,900	76	74
Minnesota	1,100	-	2/
Wisconsin	1,400	4	36
Michigan	1,400	72	38
All species	5,000	76	74
Minnesota	1,500	-	2/
Wisconsin	1,900	4	36
Michigan	1,600	72	38

1/ Exclusive of veneer cores, slabs, edgings, etc.
2/ Less than 1 M cords.

Table 19.- Production of miscellaneous piece products in the Lake States - 1949

Species and origin	Piling	Poles	Posts	Hewn ties
	Thousand pieces			
White pine	-	-	-	-
Minnesota	-	-	-	-
Wisconsin	-	-	-	-
Michigan	-	-	-	-
Red pine	1.5	5	300	-
Minnesota	1.0	5	200	-
Wisconsin	.5	-	100	-
Michigan	-	-	-	-
Jack pine	1.0	17	750	-
Minnesota	1.0	15	500	-
Wisconsin	-	2	150	-
Michigan	-	-	100	-
Spruce	-	-	-	1
Minnesota	-	-	-	-
Wisconsin	-	-	-	-
Michigan	-	-	-	1
Balsam	-	-	100	-
Minnesota	-	-	100	-
Wisconsin	-	-	-	-
Michigan	-	-	-	-
Tamarack	-	-	700	1
Minnesota	-	-	300	1
Wisconsin	-	-	250	-
Michigan	-	-	150	-
Cedar	-	118	5,400	13
Minnesota	-	70	700	1
Wisconsin	-	8	1,200	-
Michigan	-	40	3,500	12
Hemlock	-	-	150	2
Minnesota	-	-	-	-
Wisconsin	-	-	100	-
Michigan	-	-	50	2
Sfwd. total	2.5	140	7,400	17
Minnesota	2.0	90	1,800	2
Wisconsin	.5	10	1,800	-
Michigan	-	40	3,800	15

Species and origin	Piling	Poles	Posts	Hewn ties
	Thousand pieces			
Maple	.4	-	300	-
Minnesota	-	-	100	-
Wisconsin	.4	-	100	-
Michigan	-	-	100	-
Birch	-	-	250	-
Minnesota	-	-	50	-
Wisconsin	-	-	100	-
Michigan	-	-	100	-
Elm	4.0	-	450	-
Minnesota	-	-	50	-
Wisconsin	4.0	-	200	-
Michigan	-	-	200	-
Oak	1.0	-	12,800	-
Minnesota	-	-	2,400	-
Wisconsin	1.0	-	7,100	-
Michigan	-	-	3,300	-
Aspen	-	-	1,200	-
Minnesota	-	-	500	-
Wisconsin	-	-	400	-
Michigan	-	-	300	-
Ash	.1	-	-	-
Minnesota	-	-	-	-
Wisconsin	.1	-	-	-
Michigan	-	-	-	-
Misc.	-	-	600	-
Minnesota	-	-	100	-
Wisconsin	-	-	300	-
Michigan	-	-	200	-
Hdwd. total	5.5	-	15,600	-
Minnesota	-	-	3,200	-
Wisconsin	5.5	-	8,200	-
Michigan	-	-	4,200	-
All species	8.0	140	23,000	17
Minnesota	2.0	90	5,000	2
Wisconsin	6.0	10	10,000	-
Michigan	-	40	8,000	15

Table 20.- Production of mine timbers and other mine products in the Lake States - 1949

Species and origin	Total	Mine timbers	Mine lagging	Other 1/
	Thousand cubic feet			
White pine	20	15	-	5
Minn.	15	15	-	-
Wis.	-	-	-	-
Mich.	5	-	-	5
Red pine	65	60	-	5
Minn.	65	60	-	5
Wis.	-	-	-	-
Mich.	-	-	-	-
Jack pine	925	670	145	110
Minn.	925	670	145	110
Wis.	-	-	-	-
Mich.	-	-	-	-
Spruce	5	-	-	5
Minn.	-	-	-	-
Wis.	-	-	-	-
Mich.	5	-	-	5
Tamarack	1,740	305	190	1,245
Minn.	850	255	-	595
Wis.	120	10	5	105
Mich.	770	40	185	545
Cedar	1,500	-	1,485	15
Minn.	260	-	260	-
Wis.	75	-	75	-
Mich.	1,165	-	1,150	15
Hemlock	285	255	5	25
Minn.	-	-	-	-
Wis.	10	5	-	5
Mich.	275	250	5	20
Sfwd. total	4,540	1,305	1,825	1,410
Minn.	2,115	1,000	405	710
Wis.	205	15	80	110
Mich.	2,220	290	1,340	590
Maple	1,250	945	-	305
Minn.	20	20	-	-
Wis.	65	45	-	20
Mich.	1,165	880	-	285
Birch	390	330	-	60
Minn.	5	5	-	-
Wis.	40	25	-	15
Mich.	345	300	-	45
Elm	100	90	-	10
Minn.	30	30	-	-
Wis.	10	10	-	-
Mich.	60	50	-	10
Beech	75	70	-	5
Minn.	-	-	-	-
Wis.	-	-	-	-
Mich.	75	70	-	5
Oak	15	15	-	-
Minn.	-	-	-	-
Wis.	5	5	-	-
Mich.	10	10	-	-
Ash	50	50	-	-
Minn.	50	50	-	-
Wis.	-	-	-	-
Mich.	-	-	-	-
Hdwd. total	1,880	1,500	-	380
Minn.	105	105	-	-
Wis.	120	85	-	35
Mich.	1,655	1,310	-	345
All species	6,420	2,805	1,825	1,790
Minn.	2,220	1,105	405	710
Wis.	325	100	80	145
Mich.	3,875	1,600	1,340	935

1/ Cribbing, poles, trestle logs, hewed shaft timbers, smelter brands, etc.

Table 21.- Production of cooperage logs and bolts in the Lake States - 1949

Species	Total	Volume cut, by states		
		Minnesota	Wisconsin	Michigan
	M bd. ft., Int'l. 1/4-inch rule			
Maple	170	170	-	-
Basswood	205	95	110	-
Elm	560	560	-	-
Oak	1,420	450	970	-
Aspen	60	60	-	-
Cottonwood	300	300	-	-
Ash	25	25	-	-
All species	2,740	1,660	1,080	-

Table 22.- Production of miscellaneous products 1/ in the Lake States - 1949

Species	Total	Volume cut, by states		
		Minnesota	Wisconsin	Michigan
	Thousand cubic feet			
White pine	150	50	50	50
Red pine	70	30	20	20
Jack pine	160	70	30	60
Spruce	50	20	10	20
Balsam	110	40	20	50
Tamarack	50	20	10	20
Cedar	530	70	130	330
Hemlock	40	-	20	20
Total softwoods	1,160	300	290	570
Maple	570	-	70	500
Birch	170	140	20	10
Basswood	140	60	60	20
Elm	60	-	-	60
Beech	500	-	-	500
Oak	80	10	10	60
Aspen	1,160	720	300	140
Ash	10	-	-	10
Other	60	-	20	40
Total hardwoods	2,750	930	480	1,340
All species	3,910	1,230	770	1,910

1/ Rough forest products used for manufacture of matches, clothes pins, bowling pins, handles, wooden ware, rustic furniture and fences, toys, shingles, lath, log cabin materials, etc.